

Meeting report from group 2 on Human activities (Brussels, 28 June 2012)

The group discussed the chapters on human uses of the ocean: chapters 11, 12 and 17-30 of outline. The discussions were based on viewing human activities in the context of sustainable use of marine resources.

The group started by discussing the methodological framework to be used by the drafting teams for background working papers and the chapters themselves. In particular we considered the level of importance that should be associated to the many types of assessments available (refer to figure 1 for an overview):

- If available, large scale integrated assessments such as the Quality Status Reports produced by Regional Sea Conventions should be the first source of information to be used. They are discussed and quality assured by a large community of experts and States.
- These integrated reports are based largely on more detailed thematic and sectoral assessments that contain more in-depth reviews of available data, analyses, and detailed background information, and have undergone quality assurance in the process of being taken up in the more comprehensive large-scale integrative reports. The drafting teams should also consult these background reports for more detailed information on topics summarized in the integrated higher-level reports.
- To the extent that these sources are not able to meet the requirements of the drafting teams, the next level of information to consult would include major national initiatives (MSFD assessments, Norwegian management plans, Natura2000 reports, other national reports) should be consulted.
- There is a particular need in these chapters for comprehensive literature reviews and peer reviewed scientific advice on the types of ecosystem effects likely to result from specific human activities, and on factors that affect the likelihood and severity of these effects. Such reviews and advice have been produced by ICES, by IGOs (eg. FAO, IOC, UNEP), by national processes (e.g. Norway thematic assessments, Canadian CSAS Science Advisory Reports) and reviews by prestigious scientific organisations (e.g. US National Academy reports, royal societies of UK, NL, Norway, etc).
- For very specific issues not covered by any of the previous sources, or requiring more in-depth evaluation, the primary scientific literature can be consulted.
- Individual environmental impact assessments can also have valuable information. Their sheer numbers make it unfeasible to use them as a primary source, but many national or IGO processes may produce roll-ups of the individual assessments, which usually are in one of the higher categories of information.
- Wherever information is completely lacking for an activity and area, widely credible global pressure and impact assessments, such as the one by Helprin et al (2008) are strongly preferred as a starting point, compared to simply reporting that nothing is going on in an area, or that nothing at all is known.

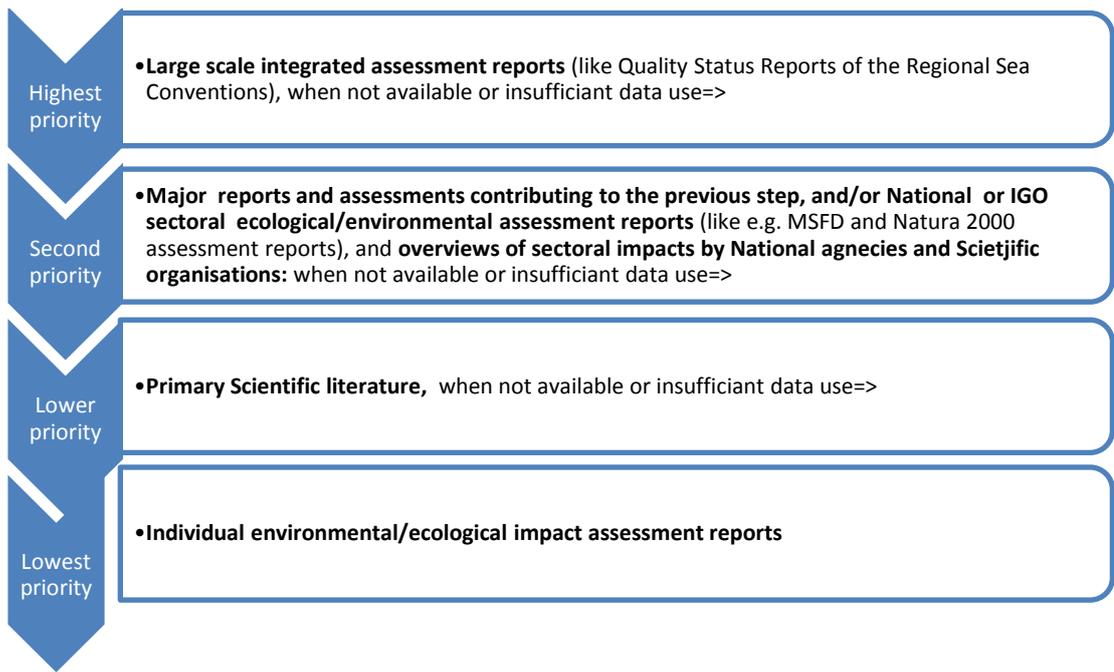


Figure 1. Decision tree for the assessment of literature for the Global Oceans Assessment

In choosing sources, preference should be given to sources that are at a distance to the policy makers themselves. Sources produced by ICES and other IGO's are likely to be more independent of policies.

Top level list of sources considered that would be a good starting point:

Ospar QSR
Helcom HOLAS assessment
Mediterranean UNEP-MAP assessments
Black Sea transboundary assessment
UNEP regional seas reports.
EEA State of the Environment Assessments.
Canadian Ecosystem Overview and Assessment Reports
Norwegian integrated ecosystem assessments.

In addition to the prioritization of information sources, the group discussed possible substructures of the individual sectoral chapters. It was agreed that there would be many benefits to all the sectoral chapters using a common structure. The proposed substructure should develop from :
Subsection:

1. The nature of the human activity, capturing many of the descriptive points in the “approved report outline” (which often means an individual activity will have many sub-activities as often treated in Life Cycle Analyses [LCAs]). This subsection also contains the best available information on status and trends in the magnitude of the activity (or, when appropriate subactivities). Whenever available, management reference points should be included in reporting status and trends. Where appropriate (i.e. they are necessary for meaningful interpretation of overall trends) regional contrasts should be provided
2. Socio and economic benefits to the human activities; nature, status and trends. Guidance on content should come from report of Group 3. As relevant should be done by meaningful subcomponents and feature regional contrasts.
3. The pathways from the human activity (and where relevant its subcomponents) to its potential environmental impacts. Developed by describing pressures associated with each activity, and ecosystem components likely to be impacted by such pressures (often referred to as “pathways of effects” analyses).
4. Best information in the status and trends in the major ecosystem impacts from section 3, These should be reported relative to management reference levels when they have been set. Where appropriate regional contrasts and hot spots should be included in reporting the status and trends in impacts..
5. Integration of trends in impacts with trends in levels of the activity, its subactivities, and the social and economic benefits from the activity (and its subactivities). Special attention to cases where the assessments being used as the basis for the chapter drew causal linked among the activity (and subactivities) and environmental trends. Regional contrasts are often necessary for meaningful integration of trends. A good discussion of what factors (environmental, socio-economic, governance, etc) might be related to differences in linkages between trends in activities, benefits and uses.
6. Capacity building needs [as per approved outline provisions]

Several additional considerations regarding the sectoral chapters we noted. In most chapters there would be a need to highlight data and monitoring needs to improve future assessments. It could be helpful to organise a metadata structure for all of the assessments considered. The metadata should be selected to describe key aspects of the assessments like spatial extent, content, assessment outcomes, time perspective (trend), targets, and these should be archived in some way that would be available to readers seeking more detailed information on assessments used in the GMA, and to those preparing future assessments. Noting the practical challenge, it is still a principle that assessments in all languages should be considered.

Process

Regarding the drafting process, several group members expressed their concern about the pool of experts. Will a sufficient number of experts with the proper competences and knowledge be nominated, and regarding the availability of both time and resources, can they do their job in a proper way? Experts often have knowledge of a very specific field of science, but they do not always have the overview or interest in the overall picture. Therefore, there was a suggestion that in addition to the pool of experts, on regional bases an advisory committee could be established for the guidance of the assessment work at the regional scale. Although there were some attractive properties to this suggestion, it would have to be considered relative to the guidance and oversight functions already explicitly allocated to the Ad Hoc Working Group of the Whole and its Bureau. Also, where countries choose to provide a focal point for contact with the Group of Experts, the role of the focal point in helping to ensure the best information is accessed at regional and national levels might fulfil some of these functions.

Individual Chapters.

The breakout group concluded its work by considering each chapter individually. Taking into account the subjects presented in subsections of the approved chapter outline, and the recommended overall common substructure for each “Human Uses and Effects” chapter, the guidance to teams of authors of Working Papers and Chapters should call specific attention to particular issues that are often chapter-specific. Our suggested points for each chapter include:

17 Shipping – value of linking to MSFD (and other) work on noise, invasive species, debris and air quality. The treatment of issues, particularly regional contrasts, might look differently if presented with impacts allocated by flag state, port state of origin, or destination port state. There is no science basis to make one allocation of impacts sounder than any other, but potentially major policy implications. Consequently, when doing these allocations (if any) report all three options, and point out differences in non-judgemental way – to allow States to debate which accounting is preferred for planning and policy.

18 Ports – More focus on habitat issues that suggested by approved outline. The idea of hotspots for impacts and social and economic activities would warrant attention. This is one of several chapters where by considering lots of port-specific impact assessments it may be possible to evaluate whether magnitude of environmental impacts scales linearly, concave or convex with scale

of port activity. If this can be extended to looking at economies of scale of port operations as well as scaling of impacts to operations, this could be very useful to policy makers.

19 Submarine Cables and pipelines – Look at reports to see if there is information on fates (and impacts) of displaced activities when areas removed from other uses by presence of cables and pipelines.

20 – Coastal, riverine, and atmospheric impacts – this is going to be a tremendously complex for large rivers. This will require a great deal more substructure than most other human activities chapters, and the GofE should give thought to this even before reaching into the pool of experts. Many decisions what is in and what is out will be to some extent arbitrary (how far upstream) and experts working on different subsets need a coherent approach to these choices. The concept of how to set reference levels for the marine ecosystem components impacted by different coastal, riverine and atmospheric inputs needs to be discussed in the chapter. Hotspot identification and regional contrasts also need to be consistent across subcomponents of these impacts.

21 Hydrocarbon industries – Again discussion of hotspots below regional scales, and whether ecosystem impacts scale linearly or non-linearly with scale and density of the structures would be valuable. A good case to use to illustrate how to approach the treatment of “factors that affect the trends and scale of impacts” . Also a case where life-cycle analyses may be particularly useful in chapter substructure (also true of some other chapters).

22 Other energy sources – the linearity of scaling of impacts to sizes of operations is particularly important here, and valuable to policy makers (what are differences in expected impacts of many small vs few large operations – also socio-economic scaling should be discussed). Important to link to treatments of transportation, cables, and land-based impacts.

23 Mining – intrinsically a hotspot issue, and likely necessary to have to go to national level assessments or lower in these cases.

24 Solid Waste Disposal – must be developed carefully in parallel with Chapter 20 (coastal and riverine inputs). Same issues about complexity of issues and need to discuss how reference points might be derived.

25 - Marine Debris - Link to Chapter 17 and 11 (lost gear). Make use of ICES-JRC, MSFD and WDF treatments of this topic.

26 Land-Sea physical interactions. Another one where scaling of impact to scale of activity (and socio-economic returns) would be particularly valuable. Make sure that along-shore transport mechanisms and impacts of their disruption is considered.

27 Tourism – One of the key chapters for evaluation of linearity or non-linearity of scale of impacts with scale of activity; and that scaling relative to economic returns from the tourism. Also need to consider second-order impacts of activities displaced from an area because tourism has become the dominant activity. The section on factors that affect the impacts will need to be treated with special care on this topic, because there is such a complex policy net in play.

28 Desalination

29 Marine Genetic resources: Need to guide teams to focus on ecosystem impacts and socio-economic returns. Steer clear of discussion of policy issues on jurisdiction and IPR issues.

30 Marine Scientific Research DO not let this become an advertisement for needy scientists and capacity building forever. Stick to the environmental and socio-economic effects of undertaking MSR. This is where emerging technologies might best be covered.

Chapter 11 – Capture fisheries – Need and opportunity for regional comparisons. Need again for lots of thematic substructure on all the diverse aspects what constitutes “fishing” (gears, scale of fishery, parts of the world etc. Need careful and balanced treatment of tradeoffs. Also link to riparian issues for anadromous fishes. Also review impacts on genetic composition of exploited stocks. ICES and FAO assessments very good starting points for nature of ecosystem impacts of capture fisheries. Should be an opportunity to discuss need for greater availability of data for future assessments.

Chapter 12 Aquaculture – Also discuss GMOs and aquaculture, disease vector potential and reality. Another one where evaluating scale of impact to scale of operations will be very helpful to policy uses of assessment.